

CONCISE EXPLANATION OF RELEVANCE OF NON-ENGLISH DOCUMENT

Japanese Document No. 3-203251

This document discloses an apparatus for detecting bending of a lead wire of an electronic component. The disclosed apparatus includes a light source that emits a light toward a number of lead wires projecting from a main portion of an electronic component that have respective free end portions that should be positioned on a common plane; an image taking device that is provided on one of opposite sides of those lead wires that is opposite to the other side thereof on which the lead wires are provided, the image taking device taking, in a direction inclined relative to a direction in which the lead wires are arranged, an image of the free end portions of the lead wires that is formed by the light that has been transmitted through the lead wires; and a detecting means for detecting bending of at least one of the lead wires, based on the image of the respective free end portions of the lead wires, taken by the image taking device. The main portion of the EC may have a rectangular shape, and the lead wires may project laterally from the four sides of the rectangular main portion of the EC. The image taking device may take, at once, an image of an entirety of the EC that is formed by the light emitted by the light source.

Japanese Document No. 7-70872

This document discloses an apparatus for mounting an electronic component (EC) on a printed circuit board (PCB). The EC has a number of lead wires that project from a main

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portion thereof such that respective free end proportions thereof should be positioned on a common plane. The free end proportions of the lead wires are soldered to a printed circuit formed on the PCB. The disclosed apparatus includes a mounting head that holds the EC and transfers and mounts it on the PCB. The disclosed apparatus further includes a detecting-wave emitting device that emits a detecting wave in a direction intersecting the above-indicated common plane for the EC held by the mounting head, so that the detecting wave is incident to a spot on the free end portion of each of the lead wires, a diameter of the spot being smaller than a width of the free end portion; a detecting-wave receiving device that receives the detecting wave reflected from the free end portion of each of the lead wires and produces an electric signal representing a position of the free end portion in a direction perpendicular to the common plane; a moving device which moves the detecting-wave emitting device and the detecting-wave receiving device, and the mounting head, relative to each other, in a direction parallel to a direction in which the leads wires are arranged, so that the detecting wave emitted by the emitting device is sequentially incident to a spot on the free end portion of each of the lead wires, while traversing the free end portions; and a judging device that judges, based on the electric signals produced by the detecting-wave receiving device being moved by the moving device, whether the position of the free end portion of each of the lead wires in the direction perpendicular to the common plane is deviated from a reference position by more than a reference amount.